



IMPLEMENTATION OF TIERED INSTRUCTION IN READING CONTRIBUTING TO THE NEEDS OF GIFTED LEARNERS IN TEACHING ENGLISH AT NAZARBAYEV INTELLECTUAL SCHOOLS, KAZAKHSTAN

Anzhela Aitbayeva¹,

Aliya Olzhayeva²

¹Centre for Educational Programmes AEO

“Nazarbayev Intellectual Schools”,

Kazakhstan

²Nazarbayev Intellectual School,

Kazakhstan

Abstract

Differentiation instruction is a tool which helps teachers to meet the learners' needs. Teacher in a differentiated classroom believes in the capacity of every learner to succeed, scaffolds next steps of every learner in a progression of learning objectives and creates a classroom which actively supports the growth of each individual learner (Tomlinson, 2014). This article examines the implementation of differentiated instruction in English reading classes in Kazakhstan. It investigates teachers' attitude towards differentiated instruction and implementation of it. A gap was revealed between teacher's actual practice of differentiation with their declared practice of it. This article also explores the reading learning objectives which are challenging for high school learners to achieve and teachers to teach. Teachers experienced difficulties with the objectives which require analysis of the text; most learners, on the other hand, reported experiencing no difficulties in achieving the learning objectives.

Keywords: differentiation, tiered instruction, learning objectives, reading, Bloom's taxonomy

1. Introduction

This pilot study explores types of differentiation instruction which teachers provide in their English lessons and examines the reading objectives which are considered difficult to teach and achieve in Grades 10 and 11. There are three factors which triggered the necessity to conduct this research. Firstly, it is the considerably low results of

¹ Correspondence: email aliah.olzhayeva@gmail.com

Nazarbayev Intellectual School graduates in SAT Reasoning and IELTS tests in relation to university admission requirements. Secondly, results of a survey in 2016 among Nazarbayev Intellectual School English teachers indicate, that teachers require more support in teaching gifted and talented learners and that teachers sometimes or even rarely differentiate during their lessons. Thirdly, reading materials and questions suggested in the course plans do not always require learners to apply analysis and read beyond short texts.

Table 1: The average results of the international tests

Grades (2015-2017)	Total number of learners	IELTS reading	IELTS writing	SAT critical reading	SAT critical writing
Grade 12	492	6	5,6		
Grade 12	16			441/800	445/800
Grade 11	222	5,1	4,5		

The goals of this research are to identify what differentiation strategies teachers implement in their teaching and identify what reading objectives are difficult to teach for teachers and achieve for students at Nazarbayev Intellectual Schools in Kazakhstan.

Tomlinson (2001) concludes that differentiation in the classroom should allow learners different opportunities to acquire content, understand and process ideas and develop products so that each individual learner can learn effectively. She identifies three main types of differentiation instruction: differentiating content, process and product. Differentiating content should be accomplished by adapting what is being taught and modifying the process to what teachers want learners to learn. When learners encounter new ideas and information, they need to process this by analyzing, applying and making sense of it, so it becomes 'theirs'. In each stage of the processing learners require scaffolding from their teacher and peers. Differentiation process also includes the alignment between the learner's current level of understanding and skills with the task complexity and encouragement of learners to choose their preferred way of learning. At the end of the unit or course, teachers encourage learners not only to take the final tests but also complete products assignments. Offering (struggling) learners to complete differentiated assignments, helps them to develop their confidence, challenge and at the same time lead them to success. Differentiating learning allows advanced learners to have an opportunity to stretch their capacities (Tomlinson, 2011). She also points out that when teachers consider implementing differentiation strategies in their lessons they should take into account learners' readiness, interests and learning preferences.

Another similar approach is Campbell (2009) three-tiered model, To-With-By. Firstly, a teacher teaches something to learners in the form of direct instruction which also includes intentional modeling that shows learners what is expected from them on the final stage. On the second tier stage teacher works with learners in the form of guided instruction. This stage involves multiple approaches to the concepts or skills introduced on the tier one, but now learners work in small groups. Finally, a teacher

pushes learners to work more independently, known as self-directed learning. This could be done in the form of project-based learning or performance-based assessments. This stage requires considerable amount of training and scaffolding (Campbell, 2009). Tiered instruction is also viewed as a tool to meet and support the needs of learners with learning needs and gifted and talented learners. At Tier I stage, the teacher works with the entire class and conducts appropriate screening procedures and uses formative assessment to identify the needs of individual learners. At Tier II stage learners work in flexible groups, these groups are not permanent, they are constantly changing depending on the aims which the teacher is pursuing. At this stage, rigorous formative assessment is conducted to understand the learner's individual strength and develop further plans for differentiated instruction (Coleman & Hughes, 2009). At Tier III a learner is offered a more individualized instruction. All stages of tiered instruction occur sequentially and each stage involves assessing learners' performance, identifying the strengths and weaknesses of an individual child and addressing learning to these needs.

A third type of tiered instruction is Preszlers' approach (2006) and is related to the adjusting of tasks to meet learners needs. This is directly related to Bloom's Taxonomy where Tier I is understanding and remembering, Tier II is application and analysis, and Tier III is evaluation and creativity. It is important to ensure that learners are able to master the lower level skills in order to move to the higher tier stages. Tiered learning tasks engage learners slightly beyond what they find easy or comfortable in order to provide genuine challenge and to promote their continued learning (Kingore, 2006). A tiered task is neither too simple so that it leads to boredom nor too difficult so that it results in frustration.

Tiered instruction supports the needs of gifted and talented learners through curriculum adjustment or curriculum enrichment programmes. Research defines gifted and talented learners as having an ability to grasp abstract concepts easily, being curious about the environment, having good memories as well as being creative (Lowenstein, 1981). Cross (1997) identified the psychological and social traits of gifted and talented children as displaying excessive self-criticism and perfectionist tendencies. Okan and Ispinar (2009) concluded that gifted and talented learners need to be challenged and that they prefer challenging tasks rather than simplified ones. If gifted and talented learners' needs are met, it can help them to develop and maximize their potential (Olzhayeva, 2014).

A number of studies on differentiation support the use of this instruction in the classroom and view it as a manageable, creative, practical and proactive way to enhance learners' engagement and achievement. One of the experimental studies investigated the impact of tiered instruction on lower and higher achieving learners, and concluded that the use of differentiated methods, namely differentiation by content and process, did not allow high achieving learners to learn a new content during the entire school year, whereas low achieving learners, on the other hand, increased their academic achievement (Richards & Omdal, 2007).

2. Methodology

2.1 Context

Nazarbayev Intellectual Schools is not representative of the schooling system in Kazakhstan. These schools were established to educate gifted and talented learners focusing on mathematics, physics and science. The curricula and teaching approaches differ from those of the state schools and are regarded here within Kazakhstan as being effective and innovative. Gifted and talented learners participate in different Olympiads, and as well, create their own projects with the assistance of university professors. Teachers in the school have exceptional opportunities to complete internships abroad and attend professional development seminars.

Reading objectives in the NIS English curriculum are categorized according to the Bloom's Taxonomy where understanding main ideas and details focus at the comprehension level and recognising the inconsistencies in the argument focus at the analysis level. Figure 2 illustrates the correspondence between reading learning objectives and Bloom's Taxonomy.

Figure 1: Revised Bloom's Taxonomy (Anderson, 2001)

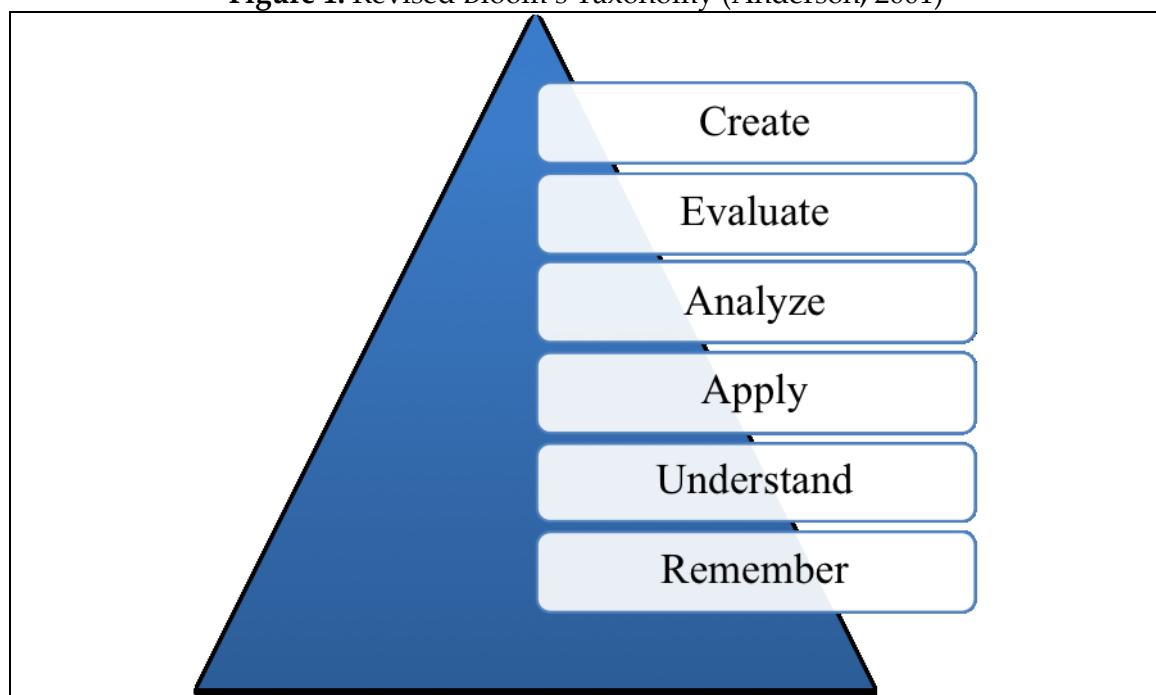
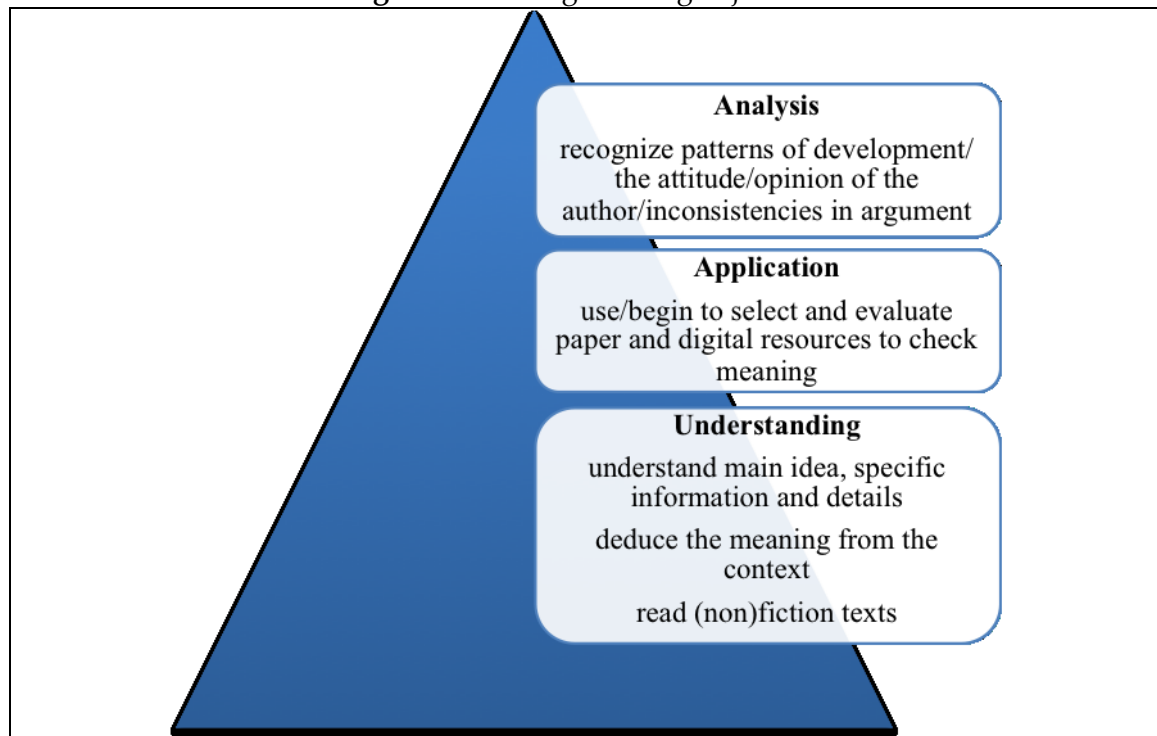


Figure 2: Reading learning objectives

Figure 2: Reading learning objectives



NIS Schools implement an integrated criteria-based assessment model. Every semester learners need to achieve between 10 and 12 learning objectives. These objectives cover four skills: reading, listening, writing and speaking. At the end of the semester learners have a summative test which is designed to evaluate the achievement of the learning objectives covered in that term. The learning objectives are a complex system which includes skills and subskills which should be further developed and improved. The learning objectives also include the expected outcomes for both teachers and learners.

2.2 Participants

The participants of the study were 766 learners from Grade 10 and 407 learners from Grade 11 who are aged between 15-18 years old and 39 English teachers teaching in Grades 10 and 11. Learners in Grade 10 have 4,5 hours of English per week and Grade 11 learners have 5 hours of English, accordingly. The expected level of learners' proficiency is from intermediate to upper-intermediate according to the Common European Framework. Learners have different linguistic backgrounds and language exposure. Learners in Grade 11 usually take international language tests throughout the year such as SAT Reasoning, IELTS and TOELF.

2.3 Research questions

There are three research questions, which were addressed in this study:

1. Which reading learning objectives do high school learners find the most difficult to achieve at Nazarbayev Intellectual Schools?
2. Which reading learning objectives in high school do English teachers find the most difficult to teach at Nazarbayev Intellectual Schools?

3. What tasks do teachers develop and what type of tiered instruction do they provide for learning objectives for reading which are difficult to attain?

2.4 Methods

This study used mixed methods research; selecting sequential mixed methods sampling. One of the methods implemented was an online questionnaire. Closed and open question types were designed. Teacher's questionnaire consisted of seven closed questions and three open-ended questions. These open-ended questions allowed to identify the types of differentiation instruction teachers implement in their lessons and type of support they need in differentiation instruction in a free account rather than limiting them to a certain pre-set answer. Learners' questionnaire included six closed questions and one open question. The online questionnaire allows to collect considerably large amount of data (Cohen, 2011).

The second method implemented was lesson observation and a follow-up interview about the lesson with the teachers. The researcher travelled to a different city and attended lessons in two schools there. Teachers were asked in advance by email for permission to observe their lessons and to interview them, with all teachers giving consent for their participation in the study. They were asked to prepare a lesson where the learners were engaged in reading activities. However, they were not informed that the focus of the lesson observation was on differentiation and types of reading tasks. In the lesson observations, the researcher was a non-participant observer who sat at the back of the class and took notes.

After the lesson observation, teachers were invited to participate in a standardized open-ended interview. All interviewees were asked the same questions: some of them were based on the questionnaire results and some questions were related to the lessons observed. Follow-up questions with teachers allowed the researcher to obtain more elaborated data regarding differentiation practice and teaching reading. During the interview process, the researcher tried to establish a positive atmosphere, gave the respondents the opportunity to elaborate their answers and summarise their opinion at the end of the interview. All the interviewees felt at ease and were eager to answer the questions.

3. Results and discussion

3.1 Results of the learners' responses

The first question of the questionnaire sought for learner's attitudes towards the reading tasks which they complete during their English classes. According to the results, 50% of learners prefer more challenging reading tasks, 30% found the reading tasks easy, boring and repetitive and approximately 20% of learners expressed the opposite view. These findings show that most learners are not challenged enough, and also, give insights that teachers used tasks and materials of a low level of difficulty.

Approximately 35% of Grade 10 and 11 learners responded that it is easy to achieve reading learning objectives, and about 50% believe that achieving them is moderately difficult. These results support the findings which showed that learners are not challenged in their reading classes. 10% of learners have difficulties and about 5% think that it is impossible to achieve some reading objectives. The next question looked at the reasons of why not achieving reading learning objectives. The results indicate that approximately 50% of learners have no difficulties in achieving reading learning objectives, about 30% find reading tasks difficult for them, 10% find the objective too broad and 4% do not understand the learning objective. Surprisingly that the results for all reading objectives in both grade levels were roughly the same. Reading objectives for Grade 10 and 11 cover a range of subskills such as identifying the main idea and detailed information which requires factual text comprehension; other objectives ask learners to recognise inconsistencies in arguments and recognise the author's attitude which requires analytical comprehension.

Figure 3: Learners' needs of teachers' support

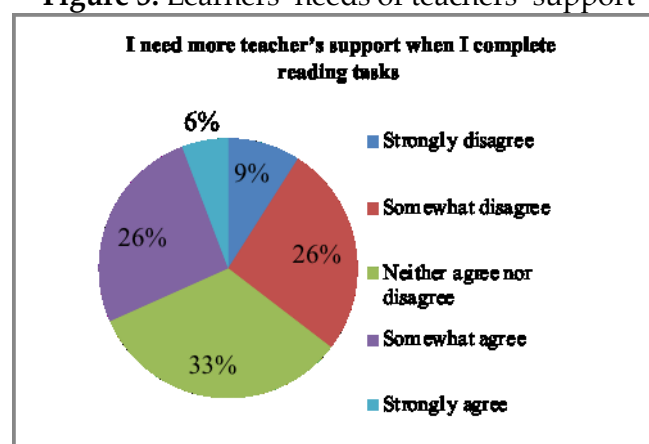


Figure 3 shows different learners' preferences for teacher's support. It might be concluded that (struggling) learnersⁱⁱ expect support and constant guidance from a teacher, while learners with high linguistic abilities believe that they do not need this support.

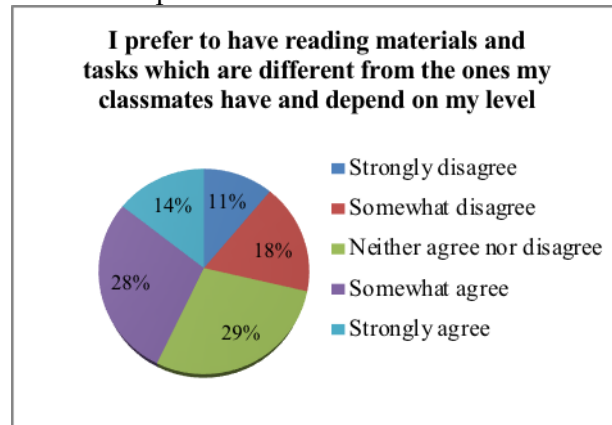
Figure 4 illustrates that 42% learners prefer differentiated reading materials and while 29% do not. These results indicate that teachers should find and adapt reading materials appropriate to the learner's individual reading level.

Learners gave recommendations how their reading skills could be better improved during their English class; some preferred to read books, short stories and world news and other authentic materials (articles, encyclopedia, journals) and then analyse them, while some suggested teachers to use examples of reading tasks from international exams (IELTS, SAT) and focus on vocabulary more. Lastly, learners expressed the view that it is necessary to discuss and analyse the text they have read.

ⁱⁱ This might also be the cultural trait of Kazakh-Russian learners: they expect to receive an immediate answer rather than think by themselves.

The last suggestion illustrates that learners read the text, do the task and hand the worksheets in and there is no discussion, no analysis and no explanation take place.

Figure 4: Learners' preferences for differentiated materials and tasks



3.2 Results of the teachers' responses

The survey results illustrate that learning objectives that require understanding the main and specific information are easy to teach, 72% and 64% respectively. The reading objectives focusing on skimming extended texts, reading a wide range of fiction and non-fiction texts and deducing the meaning from the context are relatively easy to teach (49% and 38%), though 40% of teachers responded that these objectives are moderately easy/difficult to teach and 13% acknowledged that these objectives are difficult to teach. 62% and teachers responded that recognising the attitude, opinion or tone of the writer is moderately easy/difficult to teach and 15% agreed that this objective is difficult to teach in the class.

Teachers experienced difficulties with the learning objectives which require higher order thinking skills. More than 30% and 40% of teachers acknowledged that these objectives are difficult to teach, some responded that it is impossible to teach them.

Figure 5: Reading objectives which are difficult to teach

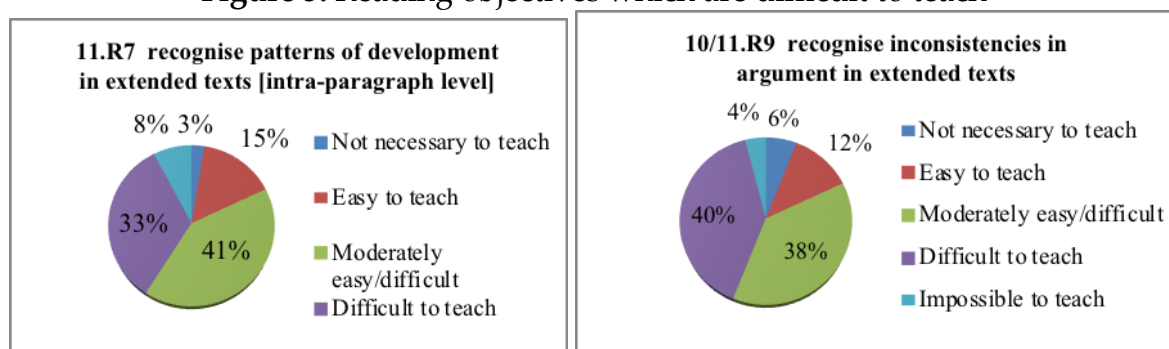
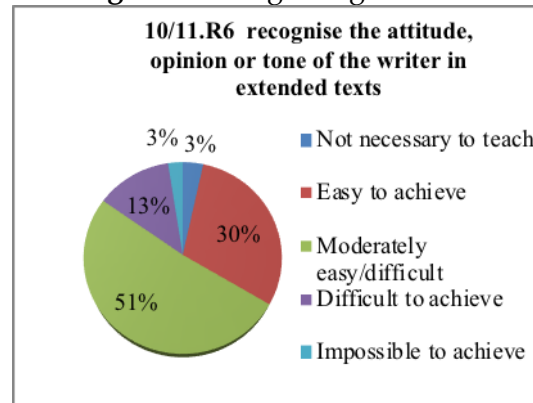


Figure 5 illustrates that these learning objectives are clearly challenging for teachers to teach in their classes. The reasons they have problems with these objectives

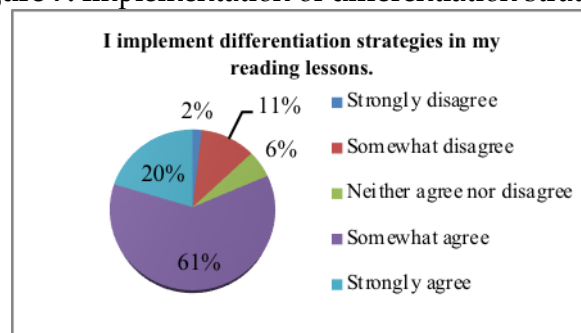
vary: 48% of teacher find it challenging to develop and find appropriate tasks, 16% do not understand the objective and 14% think the learning objective is too broad.

Figure 6: Recognizing the tone



It was quite surprising to identify that teachers do not experience any difficulties in teaching the author's tone as Figure 6 shows. This anecdotal evidence might suggest that teachers do not entirely understand this objective and possibly rarely teach the tone.

Figure 7: Implementation of differentiation strategies



The results shown in Figure 7 illustrate that differentiation instruction is widely used by the teachers in their reading lessons. According to the results, approximately 80% of teachers implement differentiation and 15% do not implement it. The open-ended questions of questionnaire indicate that the most common types of differentiation instruction which teachers implement in their lessons are differentiation by task, support, outcome and materials. Teachers support learners by highlighting the key words in the reading task, by allowing learners to use dictionaries or other reference materials and by providing prompts when undertaking the task. Teachers differentiate the outcome through performance assessment rubrics. Teachers use different reading materials depending on the learner's proficiency level.

Teachers also responded that they require workshops and professional development seminars on how to implement differentiation pedagogy in their lessons. They also want a practical guide for differentiation instruction and suggested to add theory and examples of suggested differentiated activities to the NIS English Course

Plan. These findings can also indicate that teachers do not understand Bloom's Taxonomy. Also, they do not know how to research people like Tomlinson: teachers' professional development culture is weak in Kazakhstan. The final question tried to identify how teachers determine the reading ability of their learners. The most common answers among teachers were IELTS reading test, placement tests, formative reading tasks, teacher's observation of learners' reading performance and results from summative assessment. These instruments do not show the real picture of learner's reading level and do not enable teachers to differentiate reading materials effectively. This also demonstrates that teachers do not understand what reading abilities are, because IELTS, for instance, is not about identifying a learner's reading ability level, it is a specific test that identifies whether a learner's reading is good enough for academia.

It can be concluded from the online survey data that teachers find it easy to teach reading learning objectives which are low and fundamental thinking skills in relation to the Bloom's Taxonomy and find it moderately difficult to teach higher order thinking skills which require analysis. Teachers claim that they widely practise differentiation strategies and use various tool to meet their learners' individual needs.

The second stage of the research involved visiting two schools to observe lessons and interview teachers. The researcher observed 15 lessons of Grades 10 and 11 and focused the attention on differentiation strategies and teaching of the reading learning objectives. Conclusions drawn from the lesson observation include:

1. In one of the schools, teachers do not practice differentiation. The reason given was due to lack of time and necessity because all learners take the same summative test which is not differentiated. This a major flaw in the current assessment system because the learning needs of an individual learner are not taken into account. The teachers concluded that it is not necessary and important to differentiate.
2. The reading learning objectives are not unpacked. There were no lesson objectives stated for this specific class.
3. Reading tasks teachers implemented on their lessons focused on understanding the main idea and specific factual details. Teachers tested learner's factual text comprehension.
4. It was also noticed that teachers did not provide feedback to the learners after activities and that there was insufficient scaffolding for all learners.
5. In one of the classes, the text that the teacher provided was difficult for approximately 50% of the learners. This evidence suggests that a teacher had not considered the learners' reading abilities and does not know the learners' reading abilities.

After the lesson, observation teachers were invited to participate in a follow-up interview. Some teachers reported that some learning objectives are difficult to teach to the learners: recognising the patterns of development and recognising inconsistencies in the argument. These results support the data we have obtained from the survey. Teachers stated that they have a general understanding of what differentiation is and

how it works. Teachers mostly implement differentiation by task depending on the learners' proficiency level and by support.

T1: *"As for me, I differentiate by task. For example, I may divide the learners into groups and work out the tasks of different complexity taking into account the language proficiency of my learners or I may provide different groups with different texts having the same topic."*

T2: *"By support: for pair work I group learners in such a way where higher motivated ones help those who need additional support."*

T3: *"Type of differentiation depends on the task and on the objective. For controlled practice I choose peer support, for freer practice – differentiation by task. For assessment/self-assessment – by outcome."*

T4: *"First of all, the choice of differentiated strategies depends on the lesson type."*

T5: *"Differentiation by task. I provide high motivated learner with alternative larger texts, which are more complicated by a wider range of topical vocabulary, sentence construction or tasks."*

Teachers usually organise groupworks where more proficient learners support struggling ones. Some teachers noticed that there is an overall improvement in learners' reading ability if differentiated instruction is implemented, others, however, not. Their answers are purely based on their own judgement and beliefs not on analysis data.

4. Conclusion and recommendations

The survey results illustrate that approximately 50% learners find it easy to achieve learning objectives, about 40% find them relatively easy and challenging and 10% experience difficulties. Some learners prefer to have differentiated reading materials and support from a teacher and other learners do not. This might be related to the learners' reading abilities: if learners feel unconfident and struggling while reading the text, they need more teachers' support and differentiated reading material. Learners' preferences for reading books, articles and authentic reading materials should also be taken into consideration by the curriculum developers and classroom teachers.

Teachers state that they do not have difficulties in teaching learning objectives on understanding the main idea, specific information and deducing the meaning but struggle with learning objectives on recognising inconsistencies in arguments and patterns of development. Teachers primarily differentiate by task, support, outcome and materials and explain that they need support in differentiation instruction, expressing willingness to participate in seminars and workshop on differentiation.

Lesson observations and interviews identified that teachers do not always differentiate in their classes, provide insufficient support for (struggling) learners with no feedback. Also, it indicates that teachers have limited knowledge in differentiation pedagogy. If they differentiate by task it means that learners should be given different tasks; if by support they believe that more proficient should work in groups and pairs with less proficient; by outcome it means learners produce something different from each other. Teachers also focus more on learners who are struggling; those who are

more able simply fulfil a task that is more challenging. Teachers need to realize that everything they do in their lessons should meet learners' needs and differentiation is a tool for it. Teachers definitely need to modify their pedagogy and implement differentiation strategies which meet the needs of all learners. Teacher's support can also be organized in the form of mentoring where teachers have professional conversations about differentiation.

Teachers should also be introduced to the tools which would allow them to measure the reading level of their learners and differentiate materials. One tool which can be used is lexile levelling, helping teachers to differentiate reading materials and respond to the learners' needs (<https://lexile.com>).

There are limitations in this research which should be taken into consideration future research. Language used in the survey presents limited quality results, and thus in the drawing conclusions. It was a pilot study; the representative sample is limited to two schools. It is a sample of all the 20 NIS schools thus may not fully represent the differentiated practice and difficulties which gifted and talented learners and their teachers may have.

But despite the small scaleness of this research, results of the study are important for NIS and Kazakhstani teachers in particular, curriculum developers, universities and other institutions which offer teachers professional development training courses within Kazakhstan. It is recommended that research is conducted in teacher's professional development programmes in institutions, which prepare graduates for the classroom.

References

1. Aitbayeva A., Suleimenova A. and Zabornik L. (2016) NIS Integrated Programme of Development: *How to support gifted children at English lessons*.
2. Anderson L. and Krathwohl D. (2001) *A succinct discussion of the revisions to Bloom's classic cognitive taxonomy by Lorin Anderson and David Krathwohl and how to use them effectively*. Available at: <https://thesecondprinciple.com/wp-content/uploads/2014/01/Anderson-and-Krathwohl-revised-10-2016.pdf> (Accessed 20 December 2017).
3. Campbell B. (2009) To-With-By: A three-tiered model for differentiation instruction. *The Nera Journal* 44 (2): 7-10.
4. Cohen L., Manion L. and Morrison K. (2011) *Research methods in education*. London: Routledge.
5. Coleman M.R. and Hughes C.E. (2009) Meeting the needs of gifted students within RtI Framework. *Gifted Child Today* 32 (3): 14-17.
6. Cross T.L. (1997) Psychological and social aspects of educating gifted children. *Peabody Journal of Education* 72 (3): 180-200.

7. Kingore B. (2006) Tiered Instruction: Beginning the Process. *Teaching for High Potential*. January Available at: gifted.tki.org.nz. (accessed 19 January 2016).
8. Lowenstein L.F. (1981) *The psychological problems of gifted children*. Caxtons: Pullen Publications.
9. Mackey A. and Gass S.M. (2005) *Second language research: Methodology and design*. London: Lawrence Erlbaum Associates.
10. Okan Z. and Ispinar D. (2009) Gifted students' perceptions of learning English as a foreign language. *Educational Research and Review* 4 (4): 117-126.
11. Olzhayeva A. (2014) *Oral corrective feedback in a second language classroom: a case study of eleventh grade teachers' choices and learners' preferences at a school for gifted children in Kazakhstan*. Master Thesis, University of York, UK.
12. Richards M.R.E. and Omdal S.N. (2007) Effects of tiered instruction on academic performance in a secondary science course. *Journal of Advanced Academic* 18 (3): 424-453.
13. Preszler J. (2006) Strategies That Differentiate Instruction, Grades 4-12. *On Target*. Available at: <http://www.sdesa6.org/content/projects.htm> (accessed 15 January 2016).
14. Tomlinson C.A. (2011) *How to differentiate in mixed-ability classroom*. ASCD: Alexandria.
15. Tomlinson C.A. (2014) *The differentiated classroom*. ASCD: Alexandria.

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